(c) The total year-wise budget for the Centre is as under :

(Rupees in lakhs)

1998-1999 (Actuals)	1999-2000 (Actuals)	2000-2001 (Actuals)	2001-2002 (B.E.)
1,481.00	1,910.12	2,372.89	4,965.00

Feature of National Institute of Ocean Development

4385. PROF. M. SANKARALINGAM : Will the Minister of OCEAN DEVELOPMENT be pleased to state :

(a) the main functions of the National Institute of Ocean Development;

(b) what are the salient achievements of the Institute in the field of research;

(c) the number of sites located by the Institute in different off-shore oceans, for the past ten years, State-wise; and

(d) the details of benefits derived from such sites during the same period ?

THE MINISTER OF OCEAN DEVELOPMENT (DR. MURLI MANOHAR JOSHI) : (a) and (b) The National Institute of Ocean Technology (NIOT) is a technical arm of the Department of Ocean Development (DOD), established during November, 1993 as an autonomous society under the Tamil Nadu Societies Act. NIOT's functions include technology development in the areas of Ocean Energy, Deep Sea Mining, Coastal and Environmental Engineering and Marine Instrumentation. In addition to these activities, NIOT is also implementing the National Data Buoy programme, Ocean Science and Technology for islands and operation and management of Research Vessels of DOD.

The salient achievements of the institute from its inception are as follows :

—Establishment and successful operation of pilot plant for harnessing energy from sea waves at Vizhinjam, Kerala and converting it into a National Test Facility.

—Installation and Commissioning of 10 cubic metre/day reverse osmosis based desalination Plant at National Test Facility, Vizhinjam.

—Design and fabrication of 1 MW Technology Demonstration Floating Pilot Ocean Thermal Energy Conversion plant.

—Design and testing of under water mining system at 410 m depth as an intermediate step towards nodule mining.

—Development, testing and installation of Acoustic Tide Gauges for measurement of tides.

—Development, operation and maintenance of 12 moored data buoys in Indian Seas for collection of oceanographic and surface meteorological parameters.

—Over 40 consultancy projects undertaken for development of modern facilities like underwater LNG Pipeline, single Buoy Mooring system, Port and Harbour Tranquility studies.

—Development and demonstration of the technology of a single element under water acoustic transmitter-cum-receiver operating over a wide frequency range from 500 Hz to 12 kHz.

—Collection of data on marine pollution through Coastal Research Vessels.

—Collection of bulk sample of about 125 tonnes of Polymetallic nodules and completion of close grid surveys & EIA monitoring studies at Central Indian Ocean basin (CIOB) mine site.

(c) and (d) NIOT undertakes engineering projects and scientific investigations at sites as requisitioned by user agencies from time to time. Projects taken up by NIOT in the area of site selection for coastal structures include.

(i) Seabed and oceanographic studies for Pennar Refinery at Cuddalore.

(ii) Design of a virtual jetty for VOMAC at Ennore harbour North of Chennai.

(iii) Design of a Pilot Launch Basin for Calcutta Port Trust, Kolkata.

(iv) Design of a Fishing Harbour at Tottapalli in Kerala.

(v) Design of LPG Import Jetty at Tadri, Karnataka.

(vi) Design of wharfs at Hut bay and Campbel Bay of Andaman Islands.

(vii) Design of a landing jetty at Amini Islands, Lakshadweep.

(viii) Pipeline route survey for British Gas at Pipevav, Gujarat.

These projects and investigations help in the development of offshore activities.

Discovery of Major Archaeological Site in Gulf of Cambay

4386. SHRI NANA DESHMUKH : Will the Minister of OCEAN DEVELOPMENT be pleased to State :

(a) whether a major archaeological site has been discovered in the Gulf of Cambay similar to those found in Harappan and pre-Harappan sites;

(b) is so, the details thereof; and

(c) whether the site would be declared a national monument to be preserved by the Archaeological Survey of India ?

THE MINISTER OF OCEAN DEVELOPMENT (DR. MURLI MANOHAR JOSHI) : (a) and (b) National Institute of Ocean Technology (NIOT), Chennai while carrying out multidisciplinary underwater surveys of the Gujarat coast during October, 2000 to March, 2001, located archaeological sites in the Gulf of Cambay at 30 to 40 m water depth. The site is seen to extend over a length of 9 km West of Hazira. The state of the art side scan sonar surveys have picked up images which reveal geometric objects, which are normally man made. The area is seen to be lined with well-laid house basement like features partially covered by sand waves and ripples. Whether these sites are Harappan or Pre-Harappan can be determined after detailed surveys and investigations.

(c) According to Archaeological Survey of India this site cannot be declared a National Monument at this stage, as the findings have to be confirmed through detailed surveys and investigations.

Entry of unauthorised vendors in A.C. Coaches at Secunderabad

4387. SHRI RUMANDLA RAMACHANDRAIAH : Will the Minister of RAILWAYS be pleased to State :

(a) whether complaints have been received at Secunderabad Railway Station, regarding unauthorised vendors entering the A.C. coaches;